Nov. 13, 1956 G. A. MOORE 2,770,409

HEAVY AND LIGHT DUTY CONTAINER STRUCTURE AND METHOD OF MAKING SAME

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FIG. 1

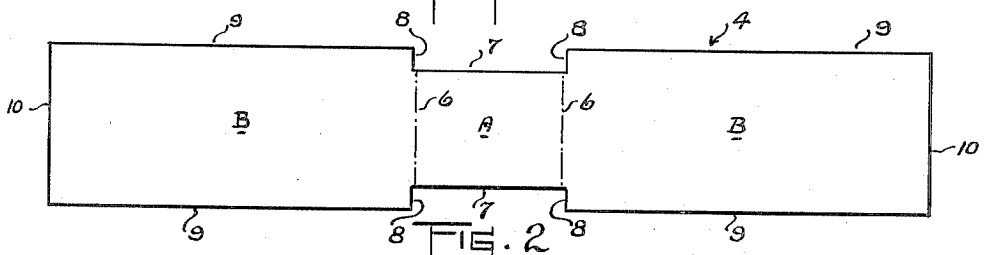


FIG. 2

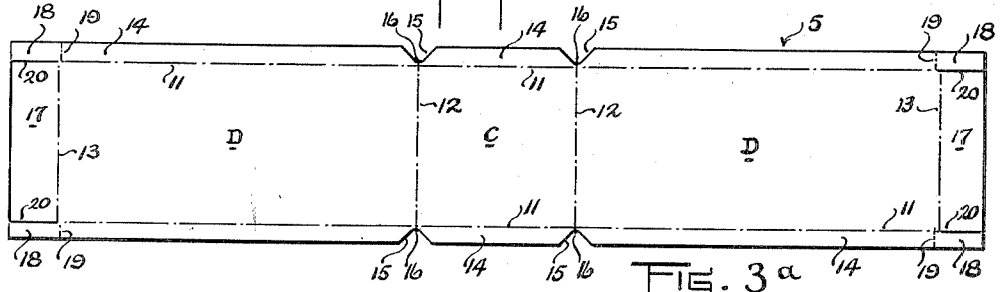


FIG. 3

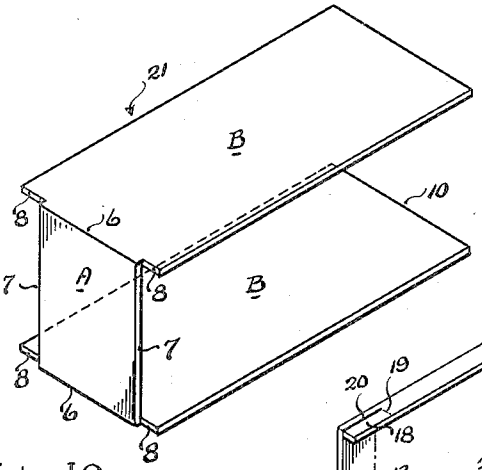


FIG. 3a

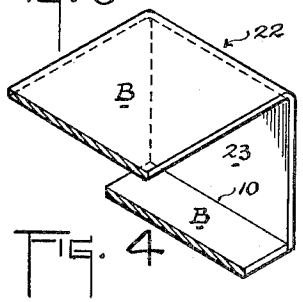


FIG. 4

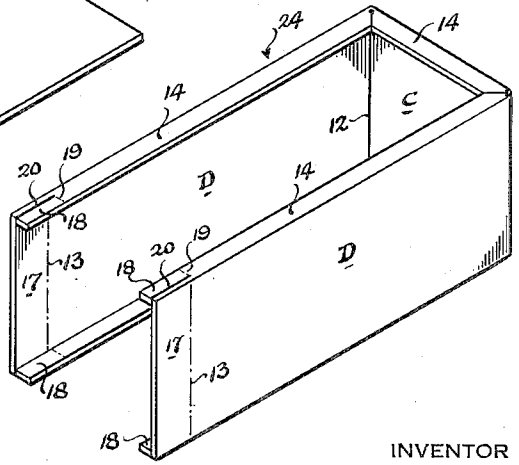
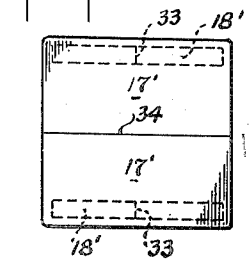


FIG. 10



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FIG. 5a

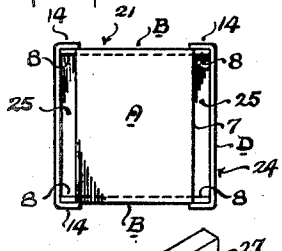
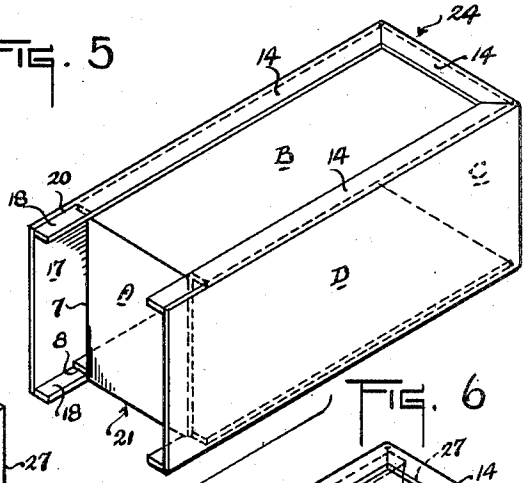


FIG. 5



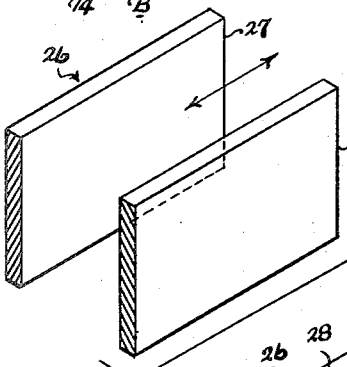


FIG. 6

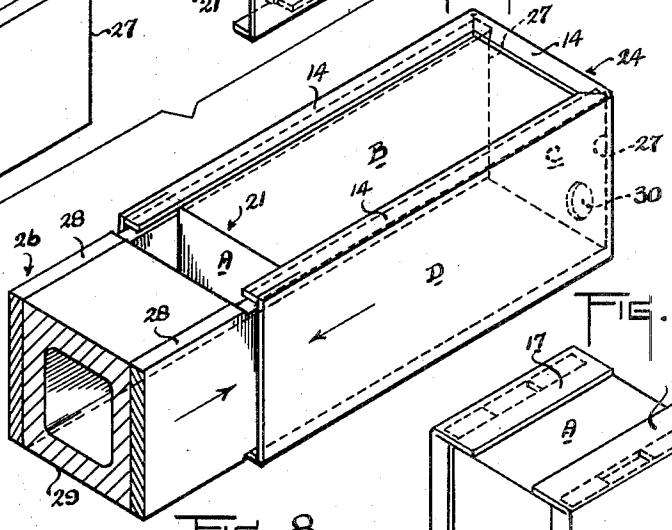


FIG. 9

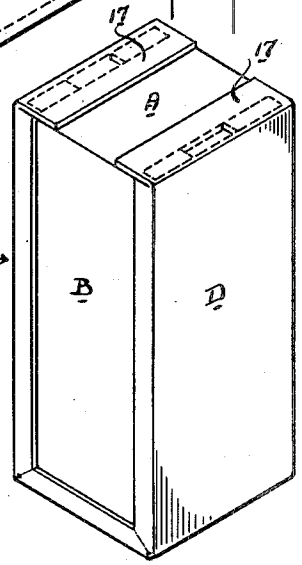


FIG. 7

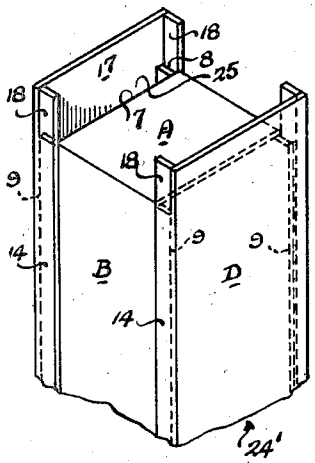
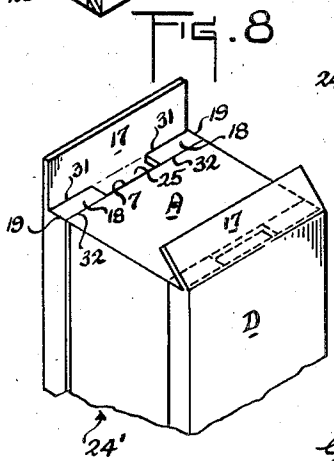


FIG. 8



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FIG. 11

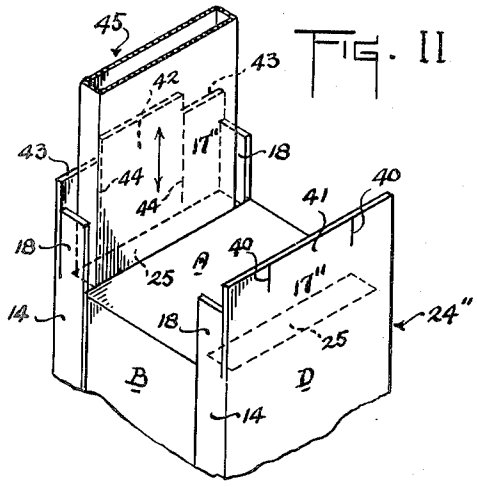


FIG. 12

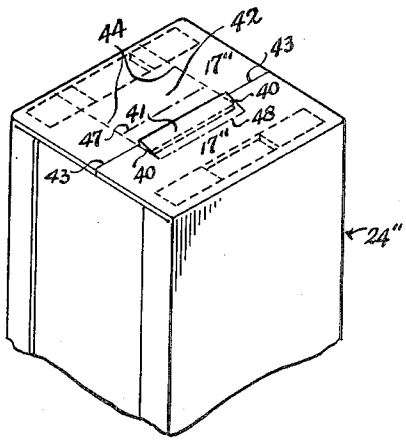


FIG. 13

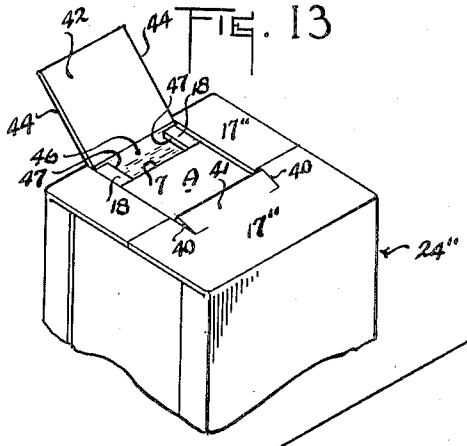
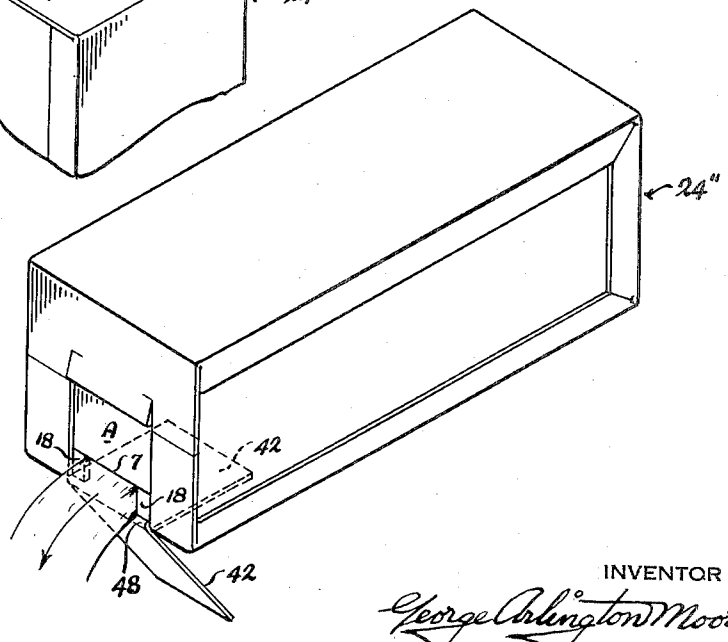


FIG. 14



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United States Patent Office 2,770,409 Patented Nov. 13, 1956

2,770,409

HEAVY AND LIGHT DUTY CONTAINER STRUCTURE AND METHOD OF MAKING SAME

George Arlington Moore, New York, N. Y.

Application March 5, 1954, Serial No. 414,242

12 Claims. (Cl. 229—23)

The invention relates to metallic or fibrous heavy and light duty containers having the same basic structure and to a method for fabricating them. The invention is related in part to the class of containers disclosed in my co-pending applications Serial No. 278,528, filed March 26, 1952, now U. S. Patent No. 2,731,167, issued January 17, 1956, Serial No. 283,217, filed April 19, 1952, now U. S. Patent No. 2,712,880, issued July 12, 1955 and Serial No. 288,412, filed May 17, 1952, now U. S. Patent No. 2,717,094, issued September 6, 1955. The present invention has for its object to provide certain new and useful advantages in the structure of the container and also present the co-operative means provided in the design of the container with which to carry out the method for its fabrication.

The principal object of the invention is to provide a simple but efficient method for fabricating rectangular shaped containers having an initially assembled structure composed of opposing related side walls with an integral end wall at each end thereof.

A further object of the invention is to provide a heavy duty container of the character described which may be constructed of web or flat sheet materials comprising the alternative use of fibrous sheet, steel, black or tin plate, aluminum sheet, fibre glass sheet or other flat web materials in the general category.

A still further object of the instant invention is to provide a strong space saving container of relatively large capacity for carrying various liquid commodities such as petroleum products, acids, lacquers, solvents and many other liquid commodities, the container being also adapted for the distribution of a wide variety of granular or viscous products.

Another object of the invention is to provide a container with side walls and pre-formed opposed end closure walls integrally related, one end wall having a pair of opposed slot openings adjacent two opposed side walls adapted for entree of wall supporting anvils upon which to form the seams of the container, the slots being closed and sealed in a manner to strongly reinforce the end wall of the container after the anvils are withdrawn.

Still another object of the invention is to provide a container having a basic structure which provides all of the wall enclosures of the container, the walls having flat and non-recessed seam junctions including both the end closure walls of the container.

A further object of the invention is to provide a simple method of entree of apparatus for interior support of the container walls through slot openings at sides of a pre-formed end wall, the supporting means being adapted to resist the pressure imposed to marginal exterior portions of the container structure when welding, soldering or curing resins with which to form united seams of the container.

And, another object is to provide a heavy duty metallic container with other opening and closing means adapted for filling and dispensing purposes and including other

means for a light duty fibrous container having provisions for another form of filling and dispensing arrangement in an opposing end wall of the container.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following detailed description, which, when taken in connection with the accompanying drawings, will disclose and illustrate a preferred embodiment thereof.

In the drawings,

Fig. 1 is a plan view of an oblong strip of sheet material having a central area with opposed marginal gaps set inwardly of the basic parallel sides of the strip which forms a portion of the container walls.

Fig. 2 is a plan view of another oblong strip of sheet material having parallel marginal side and opposed marginal end areas disposed outwardly of medial bending lines shown in dot and dash, the strip being adapted to co-operatively form and complete the other walls of the container.

Fig. 3 is a view in perspective of the pre-formed shape taken of the strip of Fig. 1.

Fig. 3*a* is a fragmentary view in perspective of a modification in the pre-formed shape of Fig. 3.

Fig. 4 is a view in perspective of the pre-formed shape taken of the strip of Fig. 2 and showing transversely bent marginal side wall portions disposed in opposed position and inwardly from three sides of the shaped strip.

Fig. 5 is a perspective view of the assembled pre-formed strips showing their inverted relationship which forms four side walls and two opposed end walls of the container, and further showing two opposed channel shape marginal wall portions extended outwardly of one end wall with outwardly spaced fragmentary end portions of wall supporting anvil bar plates used in the method of forming the seams of the container.

Fig. 5*a* is a front end elevation of the assembly of Fig. 5.

Fig. 6 is a perspective view of the container assembly showing the wall engagements with the inserted anvil bar plates which are partially broken away.

Fig. 7 is a fragmentary view in up-right perspective of the container showing an opposed end wall prior to being sealed at the opposed sides thereof.

Fig. 8 is another fragmentary view in perspective showing the steps of closing the side gaps of the container end wall.

Fig. 9 is a perspective view of the completed and hermetically sealed rigid container showing the bottom end thereof in inverted up-right position.

Fig. 10 is an end elevation of a modified reinforcement of the bottom end wall of the container.

Fig. 11 is an enlarged fragmentary view in perspective of a relatively light duty semi-rigid container in up-right position showing a filling tube engaged in one of the slot openings in the container end wall.

Fig. 12 is an enlarged fragmentary view of the container in up-right perspective showing the end wall closed and sealed.

Fig. 13 is an enlarged fragmentary view of the container in up-right perspective showing the end wall opened to expose an orifice, and

Fig. 14 is an enlarged perspective view of the container showing its end wall dispensing arrangement in action.

Referring to the drawings with reference to Figs. 1 to 4 inclusive, 4 indicates generally, one of the blanks that form two opposed side walls and an integral end closure wall, and 5 indicates the primary blank that forms two opposed adjacent side walls and another integral end closure wall of the container. The blank member 4 is primarily composed of metallic or other sheet material in guages from ten thousandths of an inch up to one eighth of an inch thickness or more depending upon the

capacity and duty requirements intended for the container. Two transverse parallel medial lines **6** divides the area of the blank to provide a central wall area portion *a* and two outwardly opposed wall area portions *b* in lateral and longitudinal position. The central wall area is provided with two opposed parallel side edges **7** having transversely disposed edges set inwardly of the dependent parallel side edges **9** of the blank. The medial lines **6** are disposed inwardly of the transverse edges **8** and the wall portions *b* have straight parallel opposed end edges **10**.

The primary blank member **5** is composed of like sheet material and is provided with sub-divided flat wall area portions consisting of a central area *c* defined with opposed and parallel longitudinally disposed medial lines **11** and two opposed transversely disposed medial lines **12** which are in parallel. Lateral wall area portions *d* extend outwardly of each media line **12** and are further defined with medial lines **11** which terminate adjacent to outwardly disposed medial lines **13**. The central area *c* is provided with two opposed extra marginal area portions **14** disposed outwardly of the medial lines **11** and which continue to extend in opposed directions to the ends of the blank as side margins. The margins are cut into with V-shaped notches **15** which have a slight fillet apex **16** disposed outwardly of the medial lines **15**, the said apices being substantially central at each terminal end of each medial line **12** of the central wall area *c*. Each end of the blank is provided with transversely disposed marginal wall area portions **17** which are disposed outwardly of the medial lines **13** and separated at transverse parallel sides from marginal end portions **18** defined with transverse medial lines **19** and cut lines **20** which are in substantial linear alignment with the medial lines **11**. The cut lines **20** terminate inwardly of the medial lines **13** and at the junction of the medial lines **19**.

The blank **4** is pre-formed to the shape **21** (Fig. 3) by bending the blank over a form on the medial lines **6** to provide the end wall *a* and opposing side walls *b*. When bending relatively heavy sheet the blank may be pre-heated to facilitate bending manipulation. The end edges **8** are each disposed inwardly of the surface plane of the end wall *a* and spaced therefrom substantially one thickness of wall material.

The form **21** may be modified to the form **22** (Fig. 3*a*) by augmenting the top wall *b* with a further extending wall portion that will provide a bent opposing end wall **23**, the end portion of which may overlap the end edge **10** of the opposing wall *b*, the purpose of such modification to be hereinafter described.

The blank **5** is pre-formed in much the same manner by bending the blank over a form to take the shape **24** (Fig. 4). The marginal portions **14** are bent into inwardly disposed flanges at right angles to each side of its depending wall *c* and *d*, the notches **15** being closed in abutment at each adjacent corner of the end wall *c*. The fillet apex **16** of the notch forms a slight corner bulk of outwardly projected material that is adapted to be peened inwardly to tightly reinforce the junctional ends of the notch abutments and adjacent corners of the container end closure wall. The side wall corner junctions of the flanges **14** are formed generally upon the medial lines **11** so that the extended portions **18** will bend inwardly from the parting lines **20** to allow one side of the severed edge to lie in abutment with an inner marginal portion of the wall portion **17**, the other severed edge lying in substantially coplanar relationship with the general surfaces of the bent flanges.

The pre-formed members **21**, **24** are assembled together in inverted relationship, the end wall *a* of the member **21** being opposed to the end wall *c* of the member **24**. Prior to the assembly, the inside surfaces of the flanges **14** and/or the outer exterior margins of the walls *b* of the member **21** may be treated or coated with compounds suitable for activation or reaction when applying heat, pressure or flame to said marginal portions after the members are assembled together and made ready for seam forming. Epoxy resin may be applied as being suitable for seam forming if desired.

The assembly provides two opposed slot-like openings **25** (Figs. 5–5*a*) disposed outwardly of the two opposing side edges **7** of the end wall *a* of the component part **21**. The opposed side walls *d* of the part **24** co-operate to form the outer wall boundary of the slots **25** and the end edges **8** of the side walls *b* define the transversely opposed side portions thereof as illustrated in Fig. 5*a*. A pair of opposed parallel anvil bars **26** are entered through the slots **25** which constitute open gates into the interior of the assembly, the width or depth of the bars being substantially equivalent to the interior width of two opposed adjacent side walls of the container structure. The thickness of the wall supporting bars coincide with the width of the slots **25** for example, a quart to gallon size container may require one quarter to three eighth inches width whereas, a fifty-five gallon size container may require up to one and one quarter inches width to provide the necessary support for seam forming operation. The container assembly may be moved over the bars which may be fixed as stationary or, alternatively if desired, the container may be in fixed position and the bars moved into and through the end wall slots. The ends **27** of the anvil bars stop against inner surface portions of the assembly end wall *c* and rest in abutment therewith during the seam forming operation.

Fig. 6 illustrates the container assembly engaged with the supporting anvil bars **28** and in relative positions for opposing the seam forming pressure that is subjected to the exterior overlapping marginal flanges **14** of the container walls. The bars **28** may be supported with a spacing casting **29** which can be adapted to be stationary or have movement in any manner desired for the purpose hereinbefore described. The arrangement of the opposed flat container seams and internal bar supports provide simple means with which to subject the wall junctional seams with strong clamping pressure for oven heating and curing purposes, and may be hydraulically or mechanically operated in one cycle of operation. The pressure imposed to the top and bottom seam margins of the container is balanced by the margin supporting bars. Various well known methods may be employed for uniting the seams of the container assembly, the method selected being dependent upon the sheet material used and the size of the duty capacity intended for the container. Spot welding may be employed when using relatively heavy guage metallic sheet. The wall side edges **9** of the component part **21** of the container are engaged in abutment with inner marginal wall surfaces of the component part **24** as shown in Fig. 7. These side edges may be doped with suitable compound prior to assembly and united with the said wall margins when uniting the general seams of the container.

When the seams **14** are united upon the two opposed sides of the container **24**, the anvil is withdrawn from the slots **25**. The container may be flushed with any desired liquid through said slots for internal cleansing or wall coating purposes. A circular hole **30** (Fig. 6) may be provided through the end wall *c* and adapted with any suitable filling and dispensing threaded orifice desired for use in handling the container contents.

The container **24'** (Fig. 7) may be closed and sealed efficiently in a simple manner inasmuch as the end closure wall *a* is integral with two opposing side walls and hence provides a strong wall foundation upon which to close the open slots **25**. The top end portions **8** of the side walls *b* are disposed downwardly of the top face of the said end wall. The top edges **8** provide an acute corner bending ledge for use of the flange portions **18** which are bent inwardly and downwardly (Fig. 8) into open portions of the slots **25** and lie flush with the end wall *a*. The outer side edges **31** of the bent portions **18** lie in abutment with

marginal portions of the opposing side walls *d* and form bending ledges for the wing gate-like portions **17**. The side edges **32** of the said bent portions are in abutment with the side edges **7** of the end wall *a* to take the thrust when bending the said wing gate-like portions inwardly. The surface of the ends **8** also provide a seat for the inwardly bent portions **18** adjacent the bending junctions thereof. Prior to bending the closing wings **17**, a suitable sealing compound may be applied to the inner faces thereof after which, the wings are bent inwardly against the ledges **31** and downwardly over the bent flange portions **18** and overlapping marginal portions of the end wall *a* adjacent to each of the edges **7**. The bent portions **17** may be united to the bent portions **18** and end wall margins by methods hereinbefore described for the uniting of the seams **14** of the container. The end wall *a* (Fig. 9) preferably constitutes in general the bottom of the container. The end wall corner junctions of the container are strongly reinforced by the plugging effects of the bent portions **18** into the slots **25** and overlapping wings **17** thus providing a hermetically sealed closure of the container.

When it is desired to fabricate the container for maximum heavy duty, the end walls of the container may be provided with added strength as illustrated in Figs. 3*a* and 10. The outer face of the end wall **23** when assembled into the component part **24** is disposed in surface contact with the inner face of the end wall *c* to form a double thickness top end wall of the container. The opposing bottom end wall may be provided with substantially two thicknesses as illustrated in Fig. 10. The inner disposed slot closing portions **18'** are lengthened so that they will have ends **33** in substantial abutment. The overlapping opposed wings **17'** are lengthened so that the edges **34** are in substantial abutment and thus provide a flush two-ply end closure wall. The inner end wall **23** adds material strength to the opposite end of the container structure to oppose any pressure or impact subjected to the converging corner ends of the end closure wall *c* of the container.

When carrying out the method of the invention to use fibrous web or more flexible sheet material with which to fabricate the container for relatively lighter duty requirements, the structural walls of the container remain basically the same when modified to provide a top end closure arrangement of the container **24''** as illustrated in Figs. 11 to 14 inclusive. The modification applies only to the opposed wing portions **17''** which are slightly altered to serve the end portions of the blank member **5** in place of the portions **17** hereinbefore defined. The blanks **4** and **5** in this case may be made of fibrous board sheet material which may be coated or otherwise provided with a dependent film of thermoplastic material suitable for wall protection and seam bonding purposes when forming the container. One of the wings **17''** is provided with a pair of opposed slit lines **40** spaced apart and extending downwardly of the top end of the wing, the slits are spaced substantially central thereof to form a latch lip portion **41**. The opposite wing **17''** is provided with a central tab portion **42** which projects upwardly and outwardly of the end edges **43** of the wing. The tab is further defined with two parallel imperforate lines **44** extending downwardly from the top edges **43** and terminate at substantially the exterior plane of the transverse end wall *a*.

The container **24''** (Fig. 11) may be filled with its intended product by means of the hollow oblong shape tube **45** which may be blended in shape to a round filling tube extending downwardly from the source of product supply (not shown). The tube **45** enters into one of the open slots **25**, the opposite open slot providing a relatively large vent which facilitates rapid filling of the container. This is due to the unrestricted displacement of air being allowed to freely leave the interior of the container while filling the container and hence will avoid any build-up of interior pressure therein during such operation. The container is closed in the same manner as hereinbefore described for the heavy duty embodiments of the structure. The folded wing end portion of the imperforate tab **42** is overlapped by the latching lip **41** of the opposing folded wing. The area section defined by the dot and dash lines **47**, **48** is not sealed to the end wall *a*. The balance of area of the folded wings **17''** and tab **42** is sealed by application of heat and pressure or, by any other suitable adhesive means desired. A small section of aluminum foil may be applied to the inner surface of the tab portion **42** and/or to the related area section of the end wall *a* if desired to facilitate the napless opening of the tab section of the container closure. The imperforate tab sides lie flatly to a portion of the flat end wall *a* and slot closing portions of the bent flanges **18** which are uniform in surface. The imperforate lines **44** do not penetrate through the inner coating of the wall material therefore, the dispensing orifice provided in the end wall of the container is efficiently covered and initially sealed by the inner flat wall surface of the tab section **42** in the wing **17''**.

The container may be conveniently opened by raising the latch **41** and lifting the unattached end portion of the tab **42**, peeling it upwardly from its bonded relationship upon the parallel imperforate lines **44** and thus expose the orifice **46** as illustrated in Fig. 13. The side shoulders formed by the opened tab edges **44** are set outwardly of the orifice edges **47** which provide a gate for the flow of liquid away from any part of the said adjacent shoulders. The tab **42** may be easily bent downwardly and upwardly against the bottom side wall of the container when pouring therefrom as illustrated in Fig. 14. The liquid stream while dispensing from the container is sharp as it leaves the orifice gate edges and any capillary liquid that may form when tilting the container upwardly to shut off the stream is shielded from the container wall by the gate tab **42** thereby eliminating any drip or droplets upon the side wall or any other portion of the container which is a sanitary feature. The container is adapted to pour from a side wall corner edge when the tab is held in reverse direction as shown in dotted lines **42** beneath the container side wall. Such arrangement forms a relatively sharp pouring corner at the extreme edge of the container end wall for clean and non-fouling dispensing of liquid from the container. The tab **42** again closes the orifice **46** by folding it back to its original position and tucking its end under the latch lip **41** which retains it in closed position. The latch overcomes the inherent spring of the tab which otherwise will not remain flat against the end wall *a* after being initially detached therefrom. The bending junction **48** of the closure tab **42** is disposed to form the bottom of the gate orifice **46** which is quite contrary to the usual arrangements of liquid dispensing orifices in fibrous containers. The improved arrangement renders the container strictly sanitary and economically efficient for distributing commodities of various kinds including dairy products.

As described hereinbefore, the end wall side openings afford efficient means through which to flush the interior of the container walls with any suitable liquid compound such as may be used for protective coating including the use of molten wax if desired. The facility provided by the said two opposing slot openings **25** in the end wall *a* insures efficient results in the speed of such operation facilitated by the large opening vent served by one of the opposing slots when introducing the liquid and the affording of a rapid drain of the liquid through both slots to evacuate it from the interior of the container quickly.

The prime principle of forming the structure of the container of this invention affords many innovations offered by the nature of the design of the end wall closure for example, when fabricating the container of tin or turnplate by the method herein disclosed, the top closure may be sealed with solder or expoxy resinous adhesive. The latch **41** may be eliminated in such case and the end

portion of the tab 42 tapered and exposed to receive the slot of the well known turning key used to open sardine cans. By turning the key the tab may be wound up to peel an opening for the container to be used for dispensing purposes.

It is thought that the foregoing description is clear for an understanding of the versatility of the contemplated improvements and attendant advantages of the container construction and the simple and relatively inexpensive method contemplated for its basic structural fabrication. The design of the container is such an innovation in the structure of a basic container that affords the construction of containers having an unusual range of size and duty capacity of wide scope without departing from the basic concepts of the said design. The convenient utility of the container, its space saving economy and simplicity of manufacture, contemplates a worthy contribution to the art of making containers in its described field, it will be apparent however, that various changes may be made in the form, construction and detailed arrangement of the component parts of both the container and method of fabrication without departing from the spirit and scope of the invention or sacrificing any of its principal advantages, the details as hereinbefore described being a preferred embodiment with which to clearly set forth the prime principles of both the container structure and the method employed for its fabrication.

What is claimed is:

1. A container of sheet material comprising a body of substantially rectangular cross section having four side walls arranged in opposing pairs, one pair having a bridged flat end wall of uniform single thickness and being integrally related with said pair of side walls, each of said walls having free end sides provided with continuous marginal flange portions bent inwardly at right angles of their corresponding walls, the other pair of said side walls having an alternate bridged flat end wall of uniform single thickness and being integrally related with corresponding side walls, said alternate end wall having two substantially parallel straight side edges spaced inwardly and parallel to interior surface portions of the first mentioned side walls to provide a pair of slot openings for access into the interior of the container, the first mentioned pair of side walls and flange portions being extended outwardly of said end wall, the extended flanged portions being partially severed from the side wall portions with slit lines terminating adjacent the surface of said end wall, the other of said flange portions being disposed in continuous overlapping relationship with exterior marginal portions of the last mentioned pair of other side walls, the overlapping parts being secured together in seam forming relationship after which, said extended side wall and severed flange portions provide means for closing and sealing said pair of slot openings.

2. A heavy duty container for liquids made of metallic sheet material comprising a body of substantially rectangular cross section having four side walls arranged in opposing pairs, each of said pairs having an integral flat end wall arranged one at each end of the container, one of said opposing pair of side walls and end wall having marginal flanges bent at right angles to the corresponding walls and disposed in overlapping relationship to marginal portions of the second of said opposing pair of side walls in bonded seam forming relationship, the end wall of said second pair of side walls being positioned inwardly of the outer ends of said side walls having the marginal flanges, said end wall having two parallel sides spaced inwardly of said side walls to provide two open slots for access into the interior of the container of wall supporting means with which to effect said bonded seam forming relationship, the marginal flange portions of the side walls that project outwardly of said end wall being partially severed from the corresponding transverse side wall portions to provide means for closing said open slots in closure forming relationship.

3. A heavy duty container according to claim 2 wherein said partially severed flange portions are of dimensional width substantially equal to the width of said open slots on two sides of said end wall, said flange portions being bent inwardly and downwardly into said slots, said side wall portions being bent inwardly and downwardly transverse of said flange portions in overlapping relationship with the exterior surfaces thereof including marginal portions of the exterior of said end wall, said bent portions being bonded to said end wall in seam forming relationship.

4. A heavy duty container according to claim 2 wherein the other integral end wall at the opposite end of the container is provided with a sealable orifice through said end wall to serve means through which to fill and dispense the intended contents of the container after said closure in the opposite end wall is formed and sealed to provide a reinforced base end of the container.

5. A rectangular container of sheet material comprising four side walls arranged in opposing pairs, each of said pairs having a flat integral end wall of substantially uniform single thickness and alternately positioned at each end of the container, each pair of side walls being contiguously related to each other, one of said flat end walls having two parallel side edges spaced inwardly of the longitudinal end sides of the corresponding side wall portions, marginal sides of which are overlapped with bonded marginal flange portions of a second pair of side walls which effect said contiguous relationship, said second pair having wall and flange portions extending outwardly and beyond the face of said one end wall having the inwardly spaced side edges which provide a pair of opposed slot openings in one end of the container to provide access into the interior thereof with means to marginally support the bending of said overlapping flange portions, the flange portions which extend outwardly of said end wall being slit longitudinally of the corresponding side portions terminating adjacent the face of said end wall so that said flange portions are rendered partially free to bend inwardly and downwardly into said slot openings and said corresponding wall portions being rendered partially free to bend transversely thereof to close said openings in seam forming relationship.

6. A container of sheet material which consists of a body portion of substantially rectangular cross section having four side walls arranged in opposing pairs, one pair being contiguously related with the other pair, each pair of side walls having an integral flat end wall bridging an alternate end of said body portion to provide six enclosure walls of the container, one end of the container comprising a flat end wall of single thickness having two straight parallel side edges spaced inwardly of interior surface portions of two opposed side walls of the container which extend outwardly of the face of said end wall and provide outer enclosure walls for a pair of relatively narrow slot openings adjacent said parallel sides of said end wall, said extended side wall portions having opposed end sides provided with marginal flanges bent inwardly at substantially right angles to the corresponding wall portions, said flange portions being longitudinally severed from said wall portions with slit lines which terminate adjacent said end wall, one of said extended side wall portions having a pair of parallel imperforate lines spaced inwardly of and terminating with said slit lines that define the severed portions of said flanges, said flange portions being bent inwardly and downwardly into portions of said slot openings, the ends of the bent flanges being opposed and spaced inwardly of said imperforate lines, said corresponding wall portions being bent inwardly and downwardly transversely of said bent flange portions and in overlapping relationship therewith including marginal exterior surface portions of said end wall in sealed closure forming relationship, the imperforate

lines in said wall portion upon being severed, constituting means for opening said closure to expose a central dispensing aperture having side edges spaced inwardly of said severed edges and the outer transverse side of said aperture being the lowermost wall portion of the partially severed wall of the closure.

7. A container according to claim 6 wherein the openable wall portion of the closure swings upon a pivot line disposed at the outermost side edges of said bent flange portions, said wall portion being adapted to reclose said aperture and be retained in closing position by latching means provided in a marginal portion of the opposing end side of another overlapping wall portion of the closure.

8. A six sided liquid carrying container of sheet material comprising a body portion of substantially rectangular cross section having side walls arranged in opposing pairs, one pair being continuously extended that provides an integral flangeless flatly bridged end wall of said body, the other pair of said side walls being continuously extended that provides an opposite integral flatly bridged end wall of the body, said other pair of side walls and integral end wall being provided with articulated flanges along opposite corner edges thereof, and the flanges being mitred at converging corner ends and thereby overlap corresponding marginal portions of said one pair of side walls in continuous surface to surface adhered relationship, said first mentioned end wall being provided with two parallel opposed straight side edges, each edge being spaced inwardly of the interior surface of each said other pair of side walls whereby a pair of spaced openings rectangular in shape is provided that by-pass said end wall for access of seam forming apparatus temporarily inserted into the interior of said six enclosure walls of the container, upon which apparatus said adhered surfaces are united together in seam forming relationship, said other pair of side walls and flange portions thereof being extended outwardly of the adjacent openings, the flange portions being slit along corner edges extended inwardly to said opening whereby bendable wall portions are provided suitable for separately closing the openings in seam forming relationship after withdrawal of said seam forming apparatus.

9. The method of making a container of two bendable strips of sheet material and of forming a first and second component part of said strips to provide six enclosure walls of the container structure simultaneously when assembling said components together, which comprises bending one of said strips U-shaped to construct the first component and forming two opposed side walls and an end wall, offsetting two opposed straight side edges of the end wall inwardly of longitudinal corner edges of the side walls and offsetting end edge portions thereof from the adjacent plane of the transversely positioned end wall, bending the second strip U-shaped to construct the second component and forming two opposed side walls and an end wall, providing flanged extensions with mitre forming joints of latter mentioned walls and articulating the flanged portions along continuous corner edges of corresponding side walls and end wall, inserting said first component into the second component with respective end walls opposed and with articulated flanges of second component overlapping corresponding margins of side walls of first component, extending portions of the second component side walls and flange portions thereof outwardly of the end wall of first component, slitting corner edges of the extended flange portions inwardly to substantially the exterior surface plane of end wall of first component, aligning longitudinal inwardly opposed free edges of said outwardly extending flange portions with said inwardly offset straight edges of the end wall of first component, thereby providing a pair of slot openings at two opposing sides of said end wall to provide access into the interior of the six enclosure walls of the formed container for inserting therein seam forming apparatus with which to adhere the overlapping articulated flanges with surface contacting continuing margins of side walls of the first component.

10. A heavy duty container of rigid sheet material comprising a bent structure formed of said material having four side walls arranged in opposing pairs to provide a body portion of substantially rectangular cross section, and each opposing pair of side walls being provided with an integral end wall that is arranged to bridge across one end of said body portion of the container, one pair of opposing side walls and its integral end wall having marginal flanges overlapping corresponding marginal surface portions of the adjacent pair of opposing side walls and being articulated along corner edges of dependent side walls and end wall in seam forming relationship, the pair of said adjacent side walls having respective end edges thereof abutted upon the interior surface of the end wall having the flanges, said one pair of side walls and flanges having a portion thereof extended outwardly of the end wall portion of said adjacent pair of side walls, said end wall being provided with two opposed straight side edges, each edge being spaced inwardly of an interior surface portion of the adjacent outwardly extended side wall and each straight edge being aligned with the transverse inwardly disposed longitudinal edge of said side wall flanges, said pair of adjacent side walls being provided with transverse end terminal edge portions that are spaced inwardly from the exterior plane of its end wall portion and thereby provide a ledge across opposite ends of a pair of slot openings provided by said inwardly spaced edges of the end wall to provide means for access into the container, the outwardly extended flange portions each being separated from their respective side wall portion along a portion of said articulated corner edge and the separated portion being terminated inwardly at said ledge whereby, the separated portion of each flange is bent inwardly over said ledge and downwardly into said opening, longitudinal side edges of each pair of bent flange portions providing a pair of end opposed ledges disposed at right angles in edge to face abutment across the interior surface of the outwardly extended side wall portion, the exterior face of said ledges being coplanar in relation to the exterior face of the adjacent end wall, each of the opposed side wall portions being bent inwardly over a pair of said ledges and downwardly upon the faces of said coplanar surfaces, the surface to surface engagements of said bent portions being united together in seam forming relationship, the opposite end wall of the container structure having orifice means provided with which to fill and dispense container contents.

11. A container of sheet material comprising a body portion of substantially rectangular cross section having four side walls arranged in opposing pairs, each opposing pair being provided with a flatly bridged integral end wall arranged at an end of the body portion and the four side walls being joined together in pairs along their respective corner edges in seam forming relationship, one of said end walls having a pair of opposite side edges that are spaced inwardly of parallel outwardly projected adjacent side wall portions that are provided with right angular inwardly opposed flanges being articulated along corner edges that overlap the body marginal portions of the pair of side walls having said one end wall, and being united together in said seam forming relationship, the projected portions only of said flanges being longitudinally separated from the adjacent projected portion of side wall along corner edges thereof, the longitudinal side edges of said separated flange portions being arranged to be coincident with said inwardly spaced edges of the adjacent end wall and outwardly spaced interior surface portion of adjacent side walls, thereby being adapted when bent to snugly fit into a pair of open slots that are provided by said spaced edges of the end wall affording means through which to gain temporary access into the interior of the six enclosure walls of the container, said

separated projected wall portions providing means when bent, to close and seal said open slots in seam forming relationship.

12. The method of making a container of two elongated strip blanks of sheet material and of providing a plurality of side walls arranged in opposing pairs and of arranging an end wall of each pair at an opposite end of the container, which includes bending one of said strips to provide one pair of opposing side walls and forming an integral wall portion bridging across one end thereof, spacing two opposite side edges of the one end wall inwardly of the longitudinal side edges of dependent side walls, bending the second strip to provide another pair of opposing side walls and forming an integral wall portion thereof bridging across one end thereof, bending marginal flange portions of latter mentioned walls inwardly along corner edges thereof and articulating said flanges to provide mitre forming joints at converging corner ends of side and end wall portions, assembling said bent strips together and arranging the single end wall portion of each strip to be positioned one at each end of enclosure forming side walls, extending a portion of the flanged side walls outwardly of the first mentioned end wall, thereby providing two slot openings at opposite sides of said end wall, abutting longitudinal side edges and end edges of said one pair of side walls upon interior faces of side and end walls that provide the flanges to overlap marginal portions of first mentioned side walls adjacent their abutting edges, arranging the longitudinal overlapping flanges so that their inwardly opposed edges align with said inwardly spaced side edges of the first mentioned end wall, slitting the outwardly extended portion of each flange along the corner edge thereof and the slit section terminating inwardly adjacent to the plane of end wall so that both flange and side wall portions are separated in order to be free for bending in separated stages, inserting through said pair of slot openings wall supporting anvil bars into the interior of the six enclosure walls of the container structure after applying seam forming adhesive material upon surface portions of said structure, applying pressure and heat upon the exterior of wall portions uniting the seams, and upon withdrawing said anvil bars, bending said outwardly extended flange portions from opposite ends of each slot opening to fit therein, and then bending the outwardly extended transverse side wall portions from the outer side of each opening to close over the bent flange portions including portions of the adjacent end wall and sealing the bent portions in seam forming relationship.

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